Using the Internet for teaching and learning often brings up the question of cheating. A common concern voiced by faculty is "How do I know that my students are doing the work?" While this question frequently arises in completely online courses, the existence of a variety of "cheat sites" (sites where students can download term papers etc.) on the Internet may cause concern in traditional and web enhanced courses as well. The information that follows may be useful to readers interested in "technology enhanced academic dishonesty."

### 21 Ways to handle technology enhanced cheating:

1. Focus on the process of writing - observe and coach the process. Require a thesis statement, an initial bibliography, an outline, notes, a first draft etc.

2. Avoid "choose any topic" papers. Tie the topic to the goals of the course.

3. Use a few papers from "cheat sites" as examples. Provide a grade for these and use as reference material. Students will be hesitant to use a service you know about.

4. Be clear and comprehensive regarding plagiarism policies. The more students know the less likely they will be to attempt plagiarism.

5. Require students to use material from class lectures, presentations, discussions etc in their graded assignments. This makes finding "matching" papers more difficult.

6. Require students to conduct an original survey or interview as part of the assignment. The survey or transcripts of the interview are included as an appendix.

7. Require an annotated bibliography as part of the process of writing the assignment. These are difficult to plagiarize.

8. Require an abstract of the paper where appropriate. Writing an accurate synopsis of a plagiarized paper is difficult.

9. Require a description of the research process with the final draft.

10. Require "raw materials" of the research process. For example, copies of the cited works.

11. Get to know your students. Require a writing sample during the first week of class. Have the students do this in their "best written style" and make it personalized and customized to them individually. Keep this on record for comparison purposes.

12. If you suspect plagiarism, look carefully at the paper and gently confront the student with your concerns. Frequently this is enough to uncover or deter plagiarism.
13. Use Plagiarism.org or Plagiarism.com to check submitted work (links below).

14. Use MOSS (Measure of Software Similarity) which detects plagiarism in programming classes (link below).

15. Make assignments relatively difficult. This makes it more difficult to get casual, though ongoing, help during the semester.

16. Frequent assessments also make getting help logistically difficult.

17. Use master type questions and case studies rather than "memorization" questions.

18. If using online quizzes - give different questions to different students - i.e. use a test bank. Add a short answer question that will be graded “by hand”.

19. If using online tests or quizzes limit the amount of time the test is available.

20. Use alternate means of assessment, portfolios and multiple measures of mastery.

21. Use proctored exams (only if absolutely necessary).

**Teaching Activities to Prevent Cheating:**

1. **Quizzes:** Create regular, frequent (weekly or daily) quizzes for students.

2. **Discussion:** Create discussions and use participation in discussions as an aid in measuring student progress.

3. **Request feedback:** Randomly e-mail all the students in the class and request a comment or two on some subject.

4. **Variance analysis:** Check the regular quiz scores to see if there is a sudden change. For example, a student flunks five quizzes and then hires someone to take the final online exam and gets an A.

5. **Spot calls:** If a teacher has any concerns about a particular individual, she or he can call the student and have a short discussion. It will quickly reveal whether the student knows the course material.

6. **Online chat exams:** The instructor can conduct an “oral” chat room exam with each student to interactively test the students’ knowledge of the course material.
Help with Cheating

Plagiarism.org includes software to detect plagiarism and allows a free trial.
http://www.plagiarism.org/

Plagiarism.com is more plagiarism software, also has a self detection test (http://www.plagiarism.com/self.detect.htm) to help students spot plagiarism in their work. http://www.plagiarism.com/

Plagiarism Webliography for Faculty
An extensive list of the websites, resources and detection tools
http://www.utpb.edu/library/plagiarism.html

MOSS (Measure of Software Similarity) Detects plagiarism in programming classes
http://theory.stanford.edu/~aiken/moss/

Word Check Systems "checks keyword uses and keyword frequencies in electronic documents and presents a "percentage of match" between compared data."
http://www.wordchecksystems.com/

Cheat Sites

Direct Essays: http://directessays.com/
A 1 Term Paper: http://www.a1-termpaper.com/
Fast Papers: http://www.fastpapers.com/
Student Network Resources: http://www.snrinfo.com/
Schoolsucks: http://www.schoolsucks.com/
Cheathouse: http://www.cheathouse.com/
EZwrite: http://www.ezwrite.com/
Term Papers on File: http://www.termpapers-on-file.com/
Research Assistance: http://www.research-assistance.com/
**Additional security techniques:**

1. First, many of the same problems regarding the authenticity of a student’s work and plagiarism exist in the traditional classroom as well. To get someone’s help through an entire online program would take substantial effort. For most students it is just not possible to have consistent help through many tests at many different times. Besides, who would consent to putting in so much work for someone else and not get credit for it?

2. Use a log-in/password system (but of course, a student could just give the username and password to someone else).

3. Make exercises difficult enough so that the person who hasn’t done the previous work in your course will not be able to complete the assignment.

4. Give many short exams that are embedded in class exercises so that it would be difficult for a student to have “help” there all the time.

5. Ask mastery-type questions so that a student must know the material himself/herself in order to answer the question (i.e. case studies Vs memorization questions).

6. Ask students to relate the subject matter to their own personal/professional/life experiences so their answers are personalized and difficult to replicate.

7. Require students to submit an outline and rough draft of term papers and essays before the final paper is due. This way, a professor can see the work in progress.

8. Give different questions to different students – construct a large set of questions from which an automated testing program can randomly select (i.e. a database of 50 questions with 10 randomly chosen).

9. Limit the times when the online test is available; ensure that the test is taken in a certain amount of time. Some automated testing programs allow this feature.

10. Provide online exam practice - sample questions, self-study questions with answers and feedback, and require a proctored, non-online examination for course credit (i.e. on campus, at a testing center, library, etc.)

11. Finally, remember that testing should never be the only means by which you assess the abilities of your students. If they are evaluated with various different methods, you have the best way of ensuring that there is real learning taking place. As with a traditional classroom, the best way to assess student and course progress is to know the student through the student’s work and pay attention to student feedback.
The American Association of Higher Education has devised nine principles of good practice for assessing student learning. These can also be helpful when thinking about how to avoid plagiarism and cheating in online courses. The principles are:

1. **The assessment of student learning begins with educational values.** Assessment is not an end in itself but a vehicle for educational improvement. Its effective practice, then, begins with and enacts a vision of the kinds of learning we most value for students and strive to help them achieve. Educational values should drive not only what we choose to assess but also how we do so. Where questions about educational mission and values are skipped over, assessment threatens to be an exercise in measuring what's easy, rather than a process of improving what we really care about.

2. **Assessment is most effective when it reflects an understanding of learning as multidimensional, integrated, and revealed in performance over time.** Learning is a complex process. It entails not only what students know but what they can do with what they know; it involves not only knowledge and abilities but values, attitudes, and habits of mind that affect both academic success and performance beyond the classroom. Assessment should reflect these understandings by employing a diverse array of methods, including those that call for actual performance, using them over time so as to reveal change, growth, and increasing degrees of integration. Such an approach aims for a more complete and accurate picture of learning, and therefore firmer bases for improving our students' educational experience.

3. **Assessment works best when the programs it seeks to improve have clear, explicitly stated purposes.** Assessment is a goal-oriented process. It entails comparing educational performance with educational purposes and expectations -- those derived from the institution's mission, from faculty intentions in program and course design, and from knowledge of students' own goals. Where program purposes lack specificity or agreement, assessment as a process pushes a campus toward clarity about where to aim and what standards to apply; assessment also prompts attention to where and how program goals will be taught and learned. Clear, shared, implementable goals are the cornerstone for assessment that is focused and useful.

4. **Assessment requires attention to outcomes but also to the experiences that lead to those outcomes.** Information about outcomes is of high importance; where students "end up" matters greatly. But to improve outcomes, we need to know about student experience along the way -- about the curricula, teaching, and kind of student effort that lead to particular outcomes. Assessment can help us understand which students learn best under what conditions; with such knowledge comes the capacity to improve the whole of their learning.

5. **Assessment works best when it is ongoing not episodic.** Assessment is a process whose power is cumulative. Though isolated, "one-shot" assessment can be better than none, improvement is best fostered when assessment entails a linked series of activities undertaken over time. This may mean tracking the process of individual students, or of cohorts of students; it may mean collecting the same examples of student performance or using the same instrument semester after semester. The point is to monitor progress toward intended goals in a spirit of continuous improvement. Along the way, the assessment process itself should be evaluated and refined in light of emerging insights.
6. **Assessment fosters wider improvement when representatives from across the educational community are involved.** Student learning is a campus-wide responsibility, and assessment is a way of enacting that responsibility. Thus, while assessment efforts may start small, the aim over time is to involve people from across the educational community. Faculty members play an especially important role, but assessment's questions can't be fully addressed without participation by student-affairs educators, librarians, administrators, and students. Assessment may also involve individuals from beyond the campus (alumni/ae, trustees, employers) whose experience can enrich the sense of appropriate aims and standards for learning. Thus understood, assessment is not a task for small groups of experts but a collaborative activity; its aim is wider, better-informed attention to student learning by all parties with a stake in its improvement.

7. **Assessment makes a difference when it begins with issues of use and illuminates questions that people really care about.** Assessment recognizes the value of information in the process of improvement. But to be useful, information must be connected to issues or questions that people really care about. This implies assessment approaches that produce evidence that relevant parties will find credible, suggestive, and applicable to decisions that need to be made. It means thinking in advance about how the information will be used, and by whom. The point of assessment is not to gather data and return “results”; it is a process that starts with the questions of decision-makers, that involves them in the gathering and interpreting of data, and that informs and helps guide continuous improvement.

8. **Assessment is most likely to lead to improvement when it is part of a larger set of conditions that promote change.** Assessment alone changes little. Its greatest contribution comes on campuses where the quality of teaching and learning is visibly valued and worked at. On such campuses, the push to improve educational performance is a visible and primary goal of leadership; improving the quality of undergraduate education is central to the institution's planning, budgeting, and personnel decisions. On such campuses, information about learning outcomes is seen as an integral part of decision making, and avidly sought.

9. **Through assessment, educators meet responsibilities to students and to the public.** There is a compelling public stake in education. As educators, we have a responsibility to the public that supports or depends on us to provide information about the ways in which our students meet goals and expectations. But that responsibility goes beyond the reporting of such information; our deeper obligation -- to ourselves, our students, and society -- is to improve. Those to whom educators are accountable have a corresponding obligation to support such attempts at improvement.

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